



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,849	03/30/2004	Seong Cheol Kang	LT-0051	2338

34610	7590	08/03/2007
KED & ASSOCIATES, LLP		
P.O. Box 221200		
Chantilly, VA 20153-1200		

EXAMINER	
BROWN, MICHAEL J	

ART UNIT	PAPER NUMBER
2116	

MAIL DATE	DELIVERY MODE
08/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/811,849

Applicant(s)

KANG, SEONG CHEOL

Examiner

Michael J. Brown

Art Unit

2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-15 and 17-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 9, 11-15 and 17-20 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7 and 21-23 is/are rejected.
- 7) ☒ Claim(s) 3-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

1. Claims 8, 9, 11-15, and 17-20 are allowed.
2. Claims 3-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 7, and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsieh(US PGPub 2003/0056123).

As to claim 1, Hsieh discloses a method for controlling CPU speed(frequency of CPU; see paragraph 0032, lines 7-8) transition, comprising receiving a System

Art Unit: 2116

Management Interrupt (SMI) signal(output; see paragraph 0032, line 6)(see paragraph 0032, lines 6-13), determining whether a bus master device(peripherals; see paragraph 0032, line 9) is in an active state when the SMI signal is for performing CPU speed transition(see paragraph 0032, lines 16-20), and canceling the CPU speed transition operation when the bus master device is determined to be in the active state(see paragraph 0035, lines 26-28) and generating a retry SMI signal at prescribed intervals(see paragraph 0034).

As to claim 2, Hsieh discloses the method further comprising performing the CPU speed transition operation when the bus master device is not in the active state(see paragraph 0033, lines 1-3).

As to claim 7, Hsieh discloses the method wherein the SMI signals are at least one of a hardware generated signal and an application program generated signal(see paragraph 0032, lines 4-13).

As to claim 21, Hsieh discloses an article including a machine-readable storage medium containing instructions for controlling CPU speed(frequency of CPU; see paragraph 0032, lines 7-8) transition in a computer system(hand-held information processing apparatus; see paragraph 0032, lines 2-3), said instructions, when executed in the computer system, cause the computer system to receive an System Management Interrupt (SMI) signal(output; see paragraph 0032, line 6)(see paragraph 0032, lines 6-13), determine whether a bus master device(peripherals; see paragraph 0032, line 9) is in an active state when the SMI signal is a first SMI CPU speed transition signal(see paragraph 0032, lines 16-20), and cancel the CPU speed transition operation when the

bus master device is in the active state(see paragraph 0035, lines 26-28) and generate an event at predetermined intervals(see paragraph 0034).

As to claim 22, Hsieh discloses the article wherein the event is a second SMI CPU speed transition signal(see paragraph 0032, lines 4-13).

As to claim 23, Hsieh discloses the article wherein the event is one of a hardware interrupt and a software interrupt(see paragraph 0032, lines 4-13).

Response to Arguments

4. Applicant's arguments, see Remarks, filed 5/17/2007, with respect to the rejection(s) of claim(s) 1-23 under 35 U.S.C. 102(e) as being anticipated by Hsieh(US PGPub 2003/0056123) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of claim(s) 1, 2, 7, and 21-23 under 35 U.S.C. 102(e) as being anticipated by Hsieh(US PGPub 2003/0056123).

In reference to remaining claims that are rejected Applicant also argues that Hsieh does not teach or suggest canceling a CPU speed transition operation when the bus master device is determined to be in the active state and generating a retry signal at prescribed intervals. Examiner disagrees as Hsieh discloses that a frequency adjustment for the CPU is not carried out until the peripheral driving devices have completed their movements(see paragraph 0035, lines 26-28). Thus meaning that as

Art Unit: 2116

long as the peripheral driving devices are busy then there will be no CPU speed transitioning. As to generating a retry signal at prescribed intervals, Hsieh discloses that when the peripheral busy counter is not "0", the system would detect the see whether it is not within a preset checking time; if no, the peripheral busy counter is checked again to see whether it is "0"(see paragraph 0034, lines 1-4). The fact that it is checked again demonstrates generating the retry signal.

Applicant also argues that Hsieh does not teach or suggest receiving a System Management Interrupt(SMI) signal. Examiner disagrees as Hsieh discloses receiving an output(see paragraph 0032, line 6) which is a result of a comparison of a number of times an idle thread has been executed, and a default number of times(see paragraph 0032, lines 4-7). The result of that comparison indicates an interrupt and thus a need to adjust CPU frequency.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Brown whose telephone number is (571)272-5932. The examiner can normally be reached Monday-Thursday from 7:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571)272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2116

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael J. Brown
Art Unit 2116



REHANA PERVEEN
SUPERVISORY PATENT EXAMINER
8/1/07